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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,981

08/29/2003

Han-Chung Lai

9892-US-PA

1980

31561

7590

01/06/2005

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, 100

TAIWAN

EXAMINER

BROCK II, PAUL E

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,981

Applicant(s)

LAI, HAN-CHUNG

Examiner

Paul E. Brock II

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 2,5-9 and 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species I, claims 1, 3, 4, and 10, in the reply filed on December 10, 2004 is acknowledged. The traversal is on the ground(s) that a "restriction requirement imposed on Species (, II, III, and IV is not proper for at least the reasons that these claimed inventions are not able to support separate patents. This is not found persuasive because each claimed species are able to support separate patents. If the applicant will state for the record that the species are obvious variants of each other, the restriction requirement will be withdrawn.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2, 5 – 9, and 11 – 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on December 10, 2004.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "wherein the pixel electrode, the data line, and the source/drain are electrically connected together" and "the

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source/drain, the data line and the pixel electrode are electrically connected” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1, 3, 4, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Specifically, the phrase used in claim 1, lines 14 - 15, "wherein the pixel electrode, the data line, and the source/drain are electrically connected together," and the phrase in claim 10, lines 3 - 4, "the source/drain, the data line and the pixel electrode are electrically connected together" appear to be literal translations. If the data line is electrically connected to the pixel electrode, the source and the drain would be shorted together, and would result in a non-functioning device. This is not how the invention is depicted in the figures. For purposes of this office action the recitation of "wherein the pixel electrode, the data line, and the source/drain are electrically connected together," in lines 13 - 14 of claim 1, will be considered --wherein the pixel electrode is electrically connected to one of the source and the drain regions and the data line is electrically connected to the other of the source and the drain regions not electrically connected to the pixel electrode.-- The recitation of "a data line and a source/drain" in line 9 of claim 1 will be considered -- a data line, a source, and a drain--. Further, the recitation of "layer and the source/drain together" in the 10th line of claim 1, will be considered --layer, the source, and the drain together--. The recitation in claim 10, lines 3 - 4, "the source/drain, the data line and the pixel electrode are electrically connected together" will be considered -- one of the source and the drain is electrically connected to the data line and the other of the source and the

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drain, not electrically connected to the data line, is electrically connected to the pixel electrode --. The recitation in claim 10, lines 2 – 3 “layer and a source/drain” will be considered --layer, a source, and a drain--.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3, 4, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al. (USPAT 6429909, Kim).

With regard to claim 1, Kim discloses in figures 1, 17a, and 17b, and column 5, lines 6 – 7 a pixel structure formed on a transparent substrate (10). Kim discloses in figure 17a, and column 9, lines 27 – 28 a first conductive layer (100) formed on a transparent substrate, wherein the first conductive layer comprises a scan line (100, outside 300) and a gate (100 under 300), the gate and the scan line being electrically connected together. Kim discloses in figure 17a, and column 9, lines 28 – 32 a first dielectric layer (200) formed on the transparent substrate covering the first conductive layer. Kim discloses in figure 17a, and column 9, lines 28 – 32 a channel layer (300) formed over the first dielectric layer above the gate. Kim discloses in figure 17a, and column 9, lines 37 – 44 a second conductive layer (400, 410, and 420) formed over the first dielectric layer, wherein the second conductive layer comprises a data line (400), a

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source (S), and a drain (D) such that the gate, the channel layer, the source, and the drain together constitute a thin film transistor, and the data line in the area above the scan line branches out into a plurality of subsidiary lines (410 and 420). Kim discloses in figure 17a, and column 9, lines 44 – 46 a second dielectric layer (500) formed on the first dielectric layer covering the second conductive layer. Kim discloses in figure 17b, and column 9, lines 44 – 50 and a pixel electrode (600) formed over the second dielectric layer, wherein the pixel electrode is electrically connected the drain region and the data line is electrically connected to the source.

With regard to claim 3, Kim discloses in figure 17b, and column 9, lines 44 – 50 wherein the second dielectric layer furthermore comprises a contact opening (C4) such that the pixel electrode and the drain are electrically connected through a contact inside the contact opening.

With regard to claim 4, Kim discloses in figure 17b, and column 9, lines 44 – 50 wherein material constituting the pixel electrode is indium-tin oxide (ITO).

With regard to claim 10, Kim discloses in figures 17a and 17b, and column 9, lines 18 – 50 a pixel structure comprising a scan line (100 not under 300), a data line (400), a pixel electrode (600) and a thin film transistor, wherein the thin film transistor comprises a gate (100 under 300), a channel layer (300), a source (S), and a drain (D) such that the gate and the scan line are electrically connected and the source is electrically connected to the data line and the drain is electrically connected to the pixel electrode, and one major characteristic of the pixel structure is that the data line in area above the scan line branches out into a plurality of subsidiary lines (410 and 420).

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Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsumoto and Kim both disclose data lines that branch into subsidiary lines.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Brock II whose telephone number is (571) 272-1723. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paul E Brock II

